

CLUSTERS – A FORM OF SPATIAL STRUCTURE WITHIN THE REGIONAL DEVELOPMENT PROCESS

Abstract

Success stories like Silicon Valley, Hollywood film industry or the economic region of Northern Italy brought into debate the role of clusters in regional development. What is a cluster? What drives organizations to build clusters or local and regional authorities to sustain such forms of spatial structure? Are clusters necessary in the new terms of globalization? These are questions actual for the Romanian business environment and for the local and regional authorities. This paper brings in discussion the main facts about clusters and looks for the potential of clusters in Romania.

Keywords: cluster, cluster drivers, regional development

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CLUSTERELE – STRUCTURĂ SPAȚIALĂ ÎN PROCESUL DE DEZVOLTARE REGIONALĂ

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Rezumat

Studii de caz de succes ca Silicon Valley, industria de film de la Hollywood sau regiunea economică din Nordul Italiei au adus în discuție rolul clusterelor în dezvoltarea regională. Ce este un cluster? Ce factori favorizează formarea de clustere sau acordarea de sprijin din partea autorităților pentru asemenea structuri spațiale? Sunt clusterelor necesare în contextul globalizării? Acestea sunt întrebări actuale și pentru mediul economic românesc sau autoritățile locale și regionale. Lucrarea de față aduce în discuție principalele aspecte ale clusterelor și investighează potențialul clusterelor în România.

Cuvinte cheie: clustere, factori favorizanți pentru clustere, dezvoltarea regională .



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1. INTRODUCTION

In the context of globalization, nations, regions and organizations are interested in competitive advantages which should guarantee the survival, stability or economical expansion. One concept that is found more and more in the strategies of the governments and businesses and that might be a solution is the concept of cluster.

Starting with the 90s many research studies focused on the development of clusters and they all emphasized the positive effect on the regional innovation and competitiveness. In the same time, the concept of cluster is not homogenous and it has different approaches and understandings.

2. THE CLUSTER THINKING

The cluster concept is not new it was first mentioned by Alfred Marshall in 1920. An adept of the neoclassical economic school, Marshall observed and analyzed the economic space around London and came to the conclusion that the organizations and businesses within this area were interconnected by three main factors. These are a pool of work force, specialized suppliers and easy access to knowledge and information, and are known under the term of “Marshallian Trinity”.

Starting with the 50s, the subject came in front and was debated by specialists from regional sciences, architecture, urbanism, regional and urban economics, political science, business organizations. All of them defined the concept of cluster, emphasized the drivers of clusters, the positive or negative effects of the clusters in the region.

One conclusion is that there isn't a united definition of clusters and every science is preoccupied to underline one characteristic before another. For example, the urbanists consider that cities are playing a major role in the forming of clusters, regional economics consider that clusters are influenced by economical factors as localization, transportation, infrastructure, work force etc.

Even the definition launched by Michael Porter in the 80s is not all over accepted. Porter described in his work a so called “diamond model of competitive advantage” which is the base of clusters. The main elements of the diamond are the factor conditions, demand conditions, related and supporting industries, firm strategy, structure and rivalry (Porter, 1998). Factor conditions refer to skilled labor force that is found easily in a particular place, specialized infrastructure or the existence of educational institutions which form and deliver the expected specialists. By demand conditions Porter emphasizes that if there is a sophisticated demand businesses will be forced to innovate more in order to stay on the

leading edge. The related and supporting industries create a network of providers for the organizations, the distance between suppliers and producers will be shortened and time will be saved. With the strategy, structure and rivalry, organizations are forced to upgrade and invest continuously in order to remain competitive on the market national and international.

On the political level the existence and sustaining of the clusters appeared in the early 90s and this is a consequence of the fact that countries and political actors recognized that clusters are not a simple business agglomeration, but a platform for innovation. "Innovation is heavily concentrated geographically, much more than high prosperity or productivity. Clusters – regional concentrations of specialized companies and institutions linked through multiple linkages and spill-over - provide an environment conducive to innovation.....They lower the barriers for transforming new ideas into businesses and capturing the benefits of globalization" (European Cluster Memorandum, 2007, pg. 2). But even with this recognition, clusters are still part of the industrial policy, competition policy or innovation and higher education policy and don't receive a special policy.

3. CLUSTER DRIVERS

Clusters exist and develop because the members benefit from advantages given by the proximity. In his book "Making sense of clusters: regional competitiveness and economic development" (2006) Joseph Cortright (2006) describes the cluster drivers that are favorable for their appearance and development.

The main drivers are:

1. *Labor market pooling* – the concentration of similar companies and organizations in a particular place creates a powerful labor force market especially for professionals. One good example is the Oberrhein Konferenz, which is a partnership between France (Alsacia, Lorena), Germany (Land Baden-Württemberg) and Switzerland (Basel) and a labor market pool for the chemical and pharmaceutical industry.
2. *Supplier specialization* – the existence of a big market and demand contributes to the expansion and specialization of suppliers. Silicon Valley expanded also due to the many suppliers for microprocessors.
3. *Knowledge spillovers* – the fact that in one place we can find organizations with common characteristics and problems take us to the conclusion that knowledge and information are transmitted much easier and quickly. Many authors consider that transfer of knowledge determines the performance of clusters (Eisingerich, Bell and Tracey, 2010). The key resides

in the creation process of knowledge and learning within the region or place. Clusters increase the speed and easiness for finding, accessing and transferring valuable knowledge.

4. *Entrepreneurship* – some authors look at entrepreneurship as an important factor in the creation of clusters. The reality shows that clusters develop because old employees based on the experience make their own companies and try to make profit of it. It seems that Silicon Valley and the clusters from Northern Italy developed following this behavior.
5. *Path dependence and lock-in* – the main idea is that clusters are a product of the local environment; this means that a set of opportunities available to any particular place will be shaped by the economic activities. One example is the Toronto Multimedia Cluster. Toronto has been the major centre for the Anglo-Canadian cultural industry sector (visual arts, live theatre, music and publishing, film production) and this generated increasing demand for visual effects, animation, post-production work. The demand for entertainment increased, it stimulated the demand by advertisers and other forms of program content for multimedia outputs (Britton, 2004).
6. *Culture and embeddedness* – the social relationships between economical actors must not be neglected; there are studies which focus on the relationships based on trust, continuity and respect. Many scholars agree that these are the foundation for successful relationships.
7. *Local demand* - a pretentious demand puts a pressure on organizations in order to develop products and services at a higher quality and this can help them to perform better.

Some authors focus also on the analyze of the cluster cycle. But here are some limits given by the poor methodology and instruments. Many are borrowed from other sciences, in practice many research studies identify economical indicators, as employment data, employment data, patent data, labor flows, industry specific data without showing the link between the region that hosts one or more clusters and the prosperity and life standard of the population that lives in the proximity. Other studies use only qualitative methods, the most popular one is the method of case study and many scholars try to define clusters by success stories.

4. CLUSTERS AND REGIONAL DEVELOPMENT

The new conditions of globalization influenced also the framework for regional economical development. In the past the national state was the only decider of its development strategy, nowadays due to the dissolution of economical barriers the importance of regions have increased and the state plays more

the role of an observer. Every region is now in a competition with other regions within a country, but also in a competition with other regions in the world. The classical model of production, bureaucratic industrial companies, and high product standardization is disappearing and is replaced by a model where organizations, businesses focus on their competitive advantages. The production of goods and services involves several companies, and they must be flexible to any changes from the environment. The production process is more knowledge, capital and investment intensive than before. This entire means that the company must cooperate very well in the value chain with the partners and that is why partnerships are very important within the region.

When deciding about the regional development the question "How to fit clusters into the economic development?" must be answered. For instance a cluster analyses can help diagnose a region's economic threats and opportunities and identify what a region might do to influence its economic future.

Within the European Union it is now a movement of creating clusters, which sometimes is difficult or nearly impossible, especially where clusters don't already exist.

In the last 20 years the European Union launched several documents and position papers regarding the importance and role of clusters. In general, the EU advises the Member States to implement strategies and policies for creating clusters and developing the existing ones. At the level of EU we may speak about cluster policies which "reflect where a country or region wishes to position itself in global competition with a mid-term perspective, building upon existing strengths and mobilizing the necessary commitment from all innovation stakeholders to move into the right direction (ProInno Working Paper no.9, 2008, pg.32). There are three different categories of cluster policies. The first category concerns "facilitating policies" directed towards creating a favorable microeconomic business environment for growth and innovation that indirectly also stimulate the emergence and dynamics of clusters. A second category comprises "traditional framework policies", such as industry and SMEs policies, research and innovation policies, and regional policy that often use the cluster approach to increase the efficiency of a specific instrument (Competitive regional clusters, 2007). A third category consists of "development policies" aiming at creating, mobilizing or strengthening a particular cluster category resulting specific branches cluster initiatives.

In the regional development the state is seen as an important player for sustaining clusters and networking. For instance, all Member States have implemented measures in order to make cluster success an economic goal. Further at the European level there are some schemes and programs which are funding collaborations between different economical actors and local authorities and other institutions. We mention here the European Regional Development Fund within the Cohesion policy. In

the same time, we can speak about a cluster management and scholars try to identify what kind of skills and competencies are required for a successful management. In some countries clusters are promoted in the same way as brands. The concept of regional cluster brand is expanding very quickly; it gives advantages by putting together the individual brands and their membership, roots in one particular region (Kaminski, 2009).

5. POTENTIAL OF CLUSTERS IN ROMANIA

In Romania the concept of cluster was introduced in the last 20 years and it is especially analyzed since our country became a Member State. Like in other Member States there isn't a clear defined cluster policy. So, we find elements specific to cluster development in the following documents and strategies:

- The National Strategy for Research Development and Innovation (2007-2013)
- The National Strategy for the Sustainable Development of Romania
- Strategies for Regional Development.

Romania faces a bad economical and social situation, low productivity, old technology and equipments, underdeveloped entrepreneurship, limited access to funding programs, insufficient investments in research and development have influenced negative the business environment. That is why in comparison with other Member States the objectives included in these strategies regard mainly things like knowledge creation by increased research and development, the stimulation of local and regional partnerships, creation of technological platforms, increasing of the international visibility, the development of "research driven clusters" etc. (Ghid pentru implementarea in Romania a conceptului de cluster inovativ, 2009).

Regarding the territorial potential of clustering in Romania, there are some studies that include a mapping. One of the studies financed by the Ministry of Economy analyzes the Romanian regions North-East, South-East, South, South-West, West, North-West, Center and Bucharest. By using different macro-economic indicators and the economic prognosis for the next 5 years the study emphasizes the main regions and industries that may become platform for future clusters. We mention here agriculture and forestry (North-East), transportation (South-East), agriculture and construction (South; South-West), construction, trade, restaurants and hotels (West), agriculture (West), manufacturing industry (Center). Bucharest remains the major attraction for companies, both national and international, and has the highest potential for cluster development in the following industries: trade, restaurants, warehousing and transportation, post and telecommunications, banking and finance, social services, administration, education, health.

Even if there is a potential for clusters there are also other barriers that must be dissolute, we mention here the lack of collaboration between companies, authorities and other institutions (universities, research institutions), lack of cooperation on horizontal and vertical levels, underdevelopment within the regions (in some cases the majority of population lives in villages, it isn't mobile and not sufficient educated).

6. CONCLUSION

In conclusion we may say that clusters are seen as an instrument to improve national and regional competitiveness. Even if there isn't a single definition of clusters, the concept is understood as an "umbrella concept" and includes the main idea that clusters are the engine of economical development, of cooperation between companies, universities, research institutions, clients and competitors, suppliers within the same geographical area (local, regional, national, trans-national).

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